Cement & Concrete Composites **14** (1992) 291–293

Index

Index for Volume 14

Bold type is used for contributors to this volume. The suffix e indicates editorial comment; c, a conference; r, a book review. Abbreviations: ASR, alkali–silicate reactivity; fr, fibre reinforced; grc, glass fibre reinforced cement; lw, lightweight; PFA, pulverised fuel ash.

Aarre, Tine and Stang, 'Evaluation of crack width in FRC with conventional reinforcement', 143–54
Abbasi, Abdul-Ghafoor F., Al-Tayyib and Al-Ali, 'Effect of hot weather on strength of reinforced concrete beams', 209–21
Acoustic emission tests, fracture process zone, 91–102
Ageing of mortar
  in Ganga canal system, 235–7
  surface layer on concrete structure, 179–83
Aggarwal, L.K., 'Studies on cement-bonded coir fibre boards', 63–69
Aitcin, P.-C., Lahlou and Chaallal, 'Behaviour of high-strength concrete under confined stresses', 185–93
Al-Ali, Mohammad Budewi, Abbasi and Al-Tayyib, 'Effect of hot weather on strength of reinforced concrete beams', 209–21
Al-Mana, A.I., Saricimen, Maslehuddin and Eid, 'Effect of field and laboratory curing on the durability characteristics of plain and pozzolan concretes', 169–77
Al-Tayyib, Abdul-Hamid J., Abbasi and Al-Ali, 'Effect of hot weather on strength of reinforced concrete beams', 209–21
Alkali–silica reaction, 72–4r
  accelerated test of reactivity of mortar bars, 249–55
Austin, S.A., Robins and Issaad, 'Influence of curing methods on the strength and permeability of GGBFS concrete in a simulated arid climate', 157–67

Banthia, Nemkumar and Trottier, 'Micromechanics of steel fiber pull-out: rate sensitivity at very low temperatures', 119–30
Batis, G. and Kouloumbi, 'Chloride corrosion of steel rebars in mortars with fly ash admixtures', 199–207
Bentur, A., Peled and Guttman, 'Treatments of polypropylene fibres to optimize their reinforcing efficiency in cement composites', 277–85
Berntsson, Leif, Sarkar and Chandra, 'Interdependence of microstructure and strength of structural lightweight aggregate concrete', 239–48
Blast-furnace slag
  in blended cement, 223–4r
  concrete
    effect of curing methods in hot arid climate, 157–66
    strength, 239–47
Bond strength of coir fr building boards, 67–9
Book reviews, 71–4r, 223–4r, 287r
Bridging in fracture process zone
  Dugdale–Barenblatt model, 83–6, 105–6
  fracture toughening mechanism, 105–17, 132, 135–8

Cement, blended, 223–4r
Cement composites
  fracture toughness, 47–50
  high-performance fr, 287r
Chaallal, O., Lahlou and Aitcin, 'Behaviour of high-strength concrete under confined stresses', 185–93
Chandra, Satish, Sarkar and Berntsson, 'Interdependence of microstructure and strength of structural lightweight aggregate concrete', 239–48
Chatterji, S. and Ignatiev, 'On the mutual compatibility of mortar and concrete in composite members', 179–83
Chloride corrosion
  repair, 288–9c
  steel rebar reinforcement in fly ash concrete, 199–206
Clay, expanded, 239–47
Climatic effects
  curing concrete in a hot arid climate, 157–66, 169–77
  strength of reinforced concrete prepared and cured in hot weather, 209–20
Code specifications, marine structures, 1–2e
Coir fibre reinforcement, cement-bonded building boards, 63–9
Composite materials in building, 225–6c
Compressive strength
  blast-furnace slag concrete
    effect of curing methods in hot arid climate, 159, 161–2
  high-strength concrete under confinement, 185–92
  lw aggregate concrete, 239–47
  marine structures, 1e
  metal fr concrete, 3–15
  model for fr cement composites, 131–40
  reinforced concrete prepared and cured in hot weather, 209–20
Concrete structures, rehabilitation, 288–9c
Conferences and symposia
  forthcoming, 75–80c, 229–32c
  reports, 225–7c, 288–90c
Confinement, high-strength concrete, 185–92
Corrosion rate, polarization resistance technique of measurement, 201–2
Coutts, R.S.P. and Warden, 'Sisal pulp reinforced cement mortar', 17–21
Cracking
  crack face bridging mechanism for fracture toughening, 105–17
  crack localization and mechanical properties of metal fr concrete, 3–15
  fatigue crack growth in concrete, 83–9
  ferrocement in shear, 33–44
  fibre pull-out dependence on stress rate and temperature, 119–29
  fr concrete with conventional reinforcement, 143–53
  lw aggregate concrete, 243–4
  microcracking of cement composites, 131–41
  microcracking and the fracture process zone, 91–102
  mortar bars tested for ASR, 251–4
  mortar surface layer, 179–83
  reinforced concrete bars prepared and cured in hot weather, 218–19, 220
Curing methods
  effect on blast-furnace slag concrete in hot arid climate, 157–66
  effect of curing time on chloride corrosion in fly ash concrete, 199–206
  effect of hot-weather preparation and curing on reinforced concrete, 209–20

Cement & Concrete Composites (**14**) (1992) — © 1993 Elsevier Science Publishers Ltd, England. Printed in Great Britain

Curing methods—*contd.*
effect on plain and pozzolan concretes, 169–77
Cusens, A.R. and Yu, 'Pullout tests of epoxy-coated reinforcement in concrete', 269–76

Dave, N.G. and Malhotra, 'Chemical composition of mortars from the Ganga Canal system', 235–8
Density
coir fr building boards, 64–7
glass fr gypsum composites, 27
sisal pulp reinforced cement, 20–1
Desayi, Prakash, Kumar and El-Kholy, 'Strength and behaviour of ferrocement in shear', 33–45
Design
development length of reinforced concrete bars prepared and cured in hot weather, 209–20
metal fr concrete structures, 195–8
Development of reinforced concrete bars prepared and cured in hot weather, 209–20
Dimensioning of metal fr concrete structures, 195–8
Dramix reinforcement, effect on mechanical behaviour, 3–15
Ductility
high-strength concrete under confinement, 185–92
metal fr concrete, 3–15
Dugdale–Barenblatt model for fatigue crack growth phenomena in concrete, 83–9, 105–6
Durability
fly ash concrete subject to chloride corrosion, 199–206
glass fr gypsum composites, 23–31
marine structures, 1–2e
plain and pozzolan concretes in hot arid climate, 169–77

Eid, O., Saricimen, Maslehuddin and Al-Mana, 'Effect of field and laboratory curing on the durability characteristics of plain and pozzolan concretes', 169–77
El-Kholy, Said A., Desayi and Kumar, 'Strength and behaviour of ferrocement in shear', 33–45
Epoxy-coated reinforcement, fibre pull-out tests, 269–76
Expanded clay lw aggregate, 239–47

Failure mode. *See* Cracking
Fatigue cracking of concrete, 83–9
Ferrocement
modelling of failure in flexure, 257–67
strength in shear, 33–44
Fibre length
effect on bond strength in coir fr building boards, 67–9
effect on mechanical properties of glass fr gypsum composites, 25–7, 31
effect on mechanical properties of metal fr concrete, 12–13
Fibre pull-out
coir fr building boards, 67–8
Fibre pull-out—*contd.*
dependence on stress rate and temperature, 119–29
testing of epoxy-coated reinforcement in concrete, 269–76
Fibre reinforced building boards, 63–9
Fibre reinforced cement
flexural behaviour with additional reinforcement, 51–61
sisal pulp, 17–21
Fibre reinforced cement composites
compressive strength, 131–40
fibre pull-out tests, 119–29
high-performance, 287r
Fibre reinforced concrete. *See* Metal fibre reinforced concrete
Fibre reinforced gypsum composites, 23–31
Flexural capacity of ferrocement near failure, 257–67
Flexural strength
fr cement with additional reinforcement, 51–61
glass fr gypsum composites, 25–31
polypropylene fr cement composites, 278–83
sisal pulp reinforced cement, 18–21
stress–deflection behaviour of reinforced cement composites, 51–61
Fly ash
in blended cement, 223–4r
concrete
chloride corrosion of steel reinforcement, 199–206
effect of curing methods in hot arid climate, 169–77
effect of fly ash on strength, 239–47
Lytag, 239–47
Fracture. *See* Cracking
Fracture toughening, crack face bridging mechanism, 105–17
Fracture toughness
cement composites, 47–50
sisal pulp reinforced cement, 18–21

Ganga Canal, 235–7
Garg, Mridul and Singh, 'Glass fibre reinforced water-resistant gypsum-based composites', 23–32
Glass fibre reinforcement
cement composites with additional reinforcement, 51–61
effect on gypsum composites, 23–31
Glass fibre tube confinement, 185–92
Guttman, H., Peled and Bentur, 'Treatments of polypropylene fibres to optimize their reinforcing efficiency in cement composites', 277–85
Gypsum plaster, glass fr, 23–31

Hannant, D.J. and Xu, 'Flexural behaviour of combined polypropylene network and grc', 51–61
High-strength concrete
cracking, 108–11, 116–17
under confinement, 185–92
Horii, Hideyuki, Shin and Pallewatta, 'Mechanism of fatigue crack growth in concrete', 83–9

Ignatiev, N. and Chatterji, 'On the mutual compatibility of mortar and concrete in composite members', 179–83
Impact strength of glass fr gypsum composites, 25–31
Impact test for fibre pull-out, 119–29
Iron fibre reinforcement, effect on mechanical behaviour, 3–15
Issaad, A., Austin and Robins, 'Influence of curing methods on the strength and permeability of GGBFS concrete in a simulated arid climate', 157–67

Kouloumbi, N. and Batis, 'Chloride corrosion of steel rebars in mortars with fly ash admixtures', 199–207
Kumar, N.Nanda, Desayi and El-Kholy, 'Strength and behaviour of ferrocement in shear', 33–45

Lahlou, K., Aitcin and Chaallal, 'Behaviour of high-strength concrete under confined stresses', 185–93
Laser speckle method for fatigue test observation, 88–9
Lattice model, crack face bridging, 111–17
Leca aggregate, 239–47
Li, Victor, 81–2e, 'A simplified micro-mechanical model of compressive strength of fiber-reinforced cementitious composites', 131–41
Liapor aggregate, 239–47
Lightweight aggregate concrete
cracking, 108–11, 116, 117
effect of curing methods in hot arid climate, 157–66
microstructure and strength, 239–47
Limestone powder in blended cement, 223–4r
Lytag concrete, 108–11, 116–17, 239–47

Malhotra, S.K. and Dave, 'Chemical composition of mortars from the Ganga Canal system', 235–8
Marine structures, 1–2e
Maslehuddin, M., Saricimen, Al-Mana and Eid, 'Effect of field and laboratory curing on the durability characteristics of plain and pozzolan concretes', 169–77
Materials science of concrete, 71–2r
Mesh reinforcement, 33–44, 257–67
Metal fr concrete
dimensioning and modelling structures, 195–8
effect of additional reinforcement on crack width, 143–53
mechanical behaviour, 3–15
Micromechanics, 81–2e, 83–154
Microstructure
lw aggregate concrete, 239–47
mortar bars tested for ASR, 251–4
polypropylene fibre reinforcement, 277–85
Mihashi, H. and Nomura, 'Microcracking and tension-softening properties of concrete', 91–103

Modelling
compressive strength of fibre-reinforced cement composites, 131–40
crack face bridging in cement composites, 105–17
crack width growth in fr concrete with conventional reinforcement, 143–53
ferrocement in flexure, 257–67
metal fr concrete structures, 195–8
mortar surface layer on concrete structure, 179–83
Mortar
ageing effects, 179–83, 235–7
ASR of mortar bars, 249–55
cracking of surface layer, 179–83

Nomura, N. and Mihashi, 'Microcracking and tension-softening properties of concrete', 91–103

Pallewatta, Tirath Manojya, Horii and Shin, 'Mechanism of fatigue crack growth in concrete', 83–9
Peled, A., Guttman and Bentur, 'Treatments of polypropylene fibres to optimize their reinforcing efficiency in cement composites', 277–85
Permeability, effect of curing methods in hot arid climate, 159–60, 164–6, 172–7
Polymer-modified cement composites, 155–6, 226–7c, 233–4e
Polymer-modified concrete, 289–90c
Polymers
epoxy-coated reinforcement, 269–76
polymer-modified cement composites, 155–6, 226–7c, 233–4e
see also Polypropylene fibre reinforcement
Polypropylene fibre reinforcement
effect on flexural behaviour of grc, 51–61
optimizing treatment, 277–85
Portland concrete, effect of curing methods in hot arid climate, 169–77

Rao, C.V.S.K., Raveendran and Verma, 'Fracture toughness of cementitious composites', 47–50
Raveendran, K.V., Verma and Rao, 'Fracture toughness of cementitious composites', 47–50
Reinforced concrete
with fibre reinforcement, 143–53
prepared and cured in hot weather, 209–20
Repair
concrete structures, 288–9c
polymer impregnation of wood, 233–4e
polymer–concrete overlays, 156
Road repairs with polymer–concrete systems, 156e
Robins, P.J., Austin and Issaad, 'Influence of curing methods on the strength and permeability of GGBFS concrete in a simulated arid climate', 157–67
Roof repairs by polymer impregnation, 233–4e
Rossi, P., 'Mechanical behaviour of metal-fibre reinforced concretes', 3–16
Rossi, P. and Wu, 'Dimensioning and numerical modelling of metal-fibre reinforced concrete (MFRC) structures', 195–8

Saricimen, H., Maslehuddin, Al-Mana and Eid, 'Effect of field and laboratory curing on the durability characteristics of plain and pozzolan concretes', 169–77
Sarkar, Shondeep L., Chandra and Berntsson, 'Interdependence of microstructure and strength of structural lightweight aggregate concrete', 239–48
Schlangen, E. and van Mier, 'Experimental and numerical analysis of micromechanisms of fracture of cement-based composites', 105–18
Shayan, A., 'The "pessimum" effect in an accelerated mortar bar test using 1M NaOH solution at 80°C', 249–55
Shear strength
ferrocement, 33–44
reinforced concrete prepared and cured in hot weather, 209–20
Shin, Hak Chul, Horii and Pallewatta, 'Mechanism of fatigue crack growth in concrete', 83–9
Shrinkage of mortar surface layer, 179–83
Silica fume, effect on strength of lw aggregate concrete, 239–47
Singh, G. and Xiong, 'Ultimate moment capacity of ferrocement reinforced with weldmesh', 257–67
Singh, Manjit and Garg, 'Glass fibre reinforced water-resistant gypsum-based composites', 23–32
Sisal pulp reinforced cement, 17–21
Stang, Henrik and Aarre, 'Evaluation of crack width in FRC with conventional reinforcement', 143–54
Steel fibre reinforcement
effect on cracking of conventionally reinforced concrete, 143–53
fibre pull-out tests, 119–29
Steel reinforcement
chloride corrosion in fly ash concrete, 199–206
combined with fr concrete, 143–53
strength of reinforced concrete prepared and cured in hot weather, 209–20
Steel tube confinement, 185–92
Steel weldmesh reinforcement, 257–67
Surface treatment of polypropylene fibre reinforcement, 277–85
Swamy, R.N., 155–6e, 233–4e

Tensile strength
glass fr gypsum composites, 25–31
metal fr concrete, 3–15
Tension softening
concrete under cyclic load, 83–9
Tension softening—*contd.*
correlation with fracture process zone development in concrete, 91–102, 105–17
Test methods
accelerated test for ASR of mortar bars, 249–55
acoustic emission test on microcracks, 91–102
impact test for fibre pull-out, 119–29
polarization resistance measurement of corrosion rate, 201–2
pull-out of epoxy-coated reinforcement in concrete, 269–76
Thermal conductivity of glass fr gypsum composites, 25, 27
Thermal effects
hot climate, 157–66, 169–77, 209–20
stress rate sensitivity of fibre pull-out, 119–29
Triaxial confinement, 185–92
Trottier, Jean-Francois and Banthia, 'Micromechanics of steel fiber pull-out: rate sensitivity at very low temperatures', 119–30

van Mier, J.G.M. and Schlangen, 'Experimental and numerical analysis of micromechanisms of fracture of cement-based composites', 105–18
Verma, A.P., Raveendran and Rao, 'Fracture toughness of cementitious composites', 47–50
Voids, effect on fracture toughness of cement composites, 47–50

Warden, P.G., 'Sisal pulp reinforced cement mortar', 17–21
Water absorption
blast-furnace slag concrete, 163–4, 165, 166, 172–7
coir fr building boards, 64–7
effect of curing methods in hot arid climate, 163–4, 165, 166, 172–7
fly ash concrete, 172–7
plain concrete, 172–7
sisal pulp reinforced cement, 20–1
Water resistance of glass fr gypsum composites, 23–31
Weldmesh reinforcement, 257–67
Woven wire mesh reinforcement, 33–44
Wu, X. and Rossi, 'Dimensioning and numerical modelling of metal-fibre reinforced concrete (MFRC) structures', 195–8

Xiong, G.J. and Singh, 'Ultimate moment capacity of ferrocement reinforced with weldmesh', 257–67
Xu, Guodong and Hannant, 'Flexural behaviour of combined polypropylene network and grc', 51–61

Yu, Z. and Cusens, 'Pullout tests of epoxy-coated reinforcement in concrete', 269–76